Overview

Product name: Human Chromogranin A ELISA Kit
Detection method: Colorimetric

Precision

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTA Plasma</td>
<td>8</td>
<td></td>
<td></td>
<td>5.87%</td>
</tr>
</tbody>
</table>

Sample type: Cell culture supernatant, Serum, Plasma
Assay type: Sandwich (quantitative)
Sensitivity: 168 pg/ml
Range: 0.195 ng/ml - 12.5 ng/ml

Recovery

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum</td>
<td>110</td>
<td>105% - 116%</td>
</tr>
<tr>
<td>Cell culture media</td>
<td>93</td>
<td>85% - 99%</td>
</tr>
<tr>
<td>Hep Plasma</td>
<td>113</td>
<td>106% - 119%</td>
</tr>
<tr>
<td>EDTA Plasma</td>
<td>114</td>
<td>110% - 118%</td>
</tr>
<tr>
<td>Cit plasma</td>
<td>117</td>
<td>113% - 122%</td>
</tr>
</tbody>
</table>

Assay time: 1h 30m
Chromogranin A in vitro SimpleStep ELISA® kit is designed for the quantitative measurement of human serum, plasma, and cell culture supernatant samples.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (ab203359) is available to use as an alternative to the 96-well microplate provided with SimpeStep ELISA® kits.

Notes

Chromogranin A (CHGA, CgA, also known as Parathyroid secretory protein 1) is a member of the granin family, which are acidic proteins found in the secretory granules of endocrine cells. CHGA consists of ~460 amino acids, and is processed into numerous peptides that have diverse activities. Some of the peptides affect the secretion of other hormones, regulate metabolism, and regulate neural pathways that control behavior. Research has shown CHGA to be elevated in the blood of cancer patients, to inhibit angiogenesis, and affect tumor response to chemotherapy. It is a popular biomarker for Neuroendocrine tumors, and increased levels have been detected in patients with lung cancer, prostate cancer, and breast cancer. Elevated CHGA serum levels have also been detected in non-cancer disease state patients with heart and renal failure, hypertension, rheumatoid arthritis, and various other inflammatory diseases.
Pancreastatin strongly inhibits glucose induced insulin release from the pancreas.

Belongs to the chromogranin/secretogranin protein family.

Sulfated on tyrosine residues and/or contains sulfated glycans.

O-glycosylated with core 1 or possibly core 8 glycans.

Cytoplasmic vesicle > secretory vesicle lumen. Cytoplasmic vesicle > secretory vesicle membrane. Secreted. Associated with the secretory granule membrane through direct interaction to SCG3 that in turn binds to cholesterol-enriched lipid rafts in intragranular conditions.

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Background-subtracted data values (mean +/- SD) are graphed.
Titration of Human serum and plasma samples within the working range of the assay.

Background-subtracted data values (mean +/- SD, n = 2) are graphed.

Non-background subtracted data from duplicate measurements are plotted. Chromogranin A was detectable in SY5Y cell culture supernatants but not HeLa cell culture.

Titration of SY5Y and HeLa cell culture supernatants within the working range of the assay.

Duplicate interpolated values of Chromogranin A are graphed. Medical histories of individual donors were not known. Mean Chromogranin A concentration observed was 10.57 ng/mL.

Interpolated concentrations of Chromogranin A across individual healthy male donors.

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